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09/420,368	10/18/1999	GERARD FRANCIS MCGLINCHEY	T0461/7003	2702

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STEVEN J HENRY  
C/O WOLF GREENFIELD & SACKS PC  
FEDERAL RESERVE PLAZA  
600 ATLANTIC AVENUE  
BOSTON, MA 022102211

EXAMINER

NGUYEN, HIEP

ART UNIT

PAPER NUMBER

2816

DATE MAILED: 08/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/420,368

Applicant(s)

MCGLINCHEY, GERARD FRANC

Examiner

Hiep Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All   b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This is responsive to the amendment filed on 06-02-03. Applicant's arguments with respect to references of Burke (US Pat. 3,843,834) have been carefully considered but they are not deemed to be persuasive to overcome the reference. Thus the claims remained rejected under Burke and 112 first and second paragraphs. However, the rejections are changed because of the amendment of the claims.

#### *Specification*

The disclosure is objected to because of the following informalities: The disclosure in the specification on lines 15-18 is confusing. Figures 5 and 6 of the present application shows that when the bridge current driver (52) is selected, **the termination elements** are not coupled to the **mid-point termination voltage** because there are no termination elements connected to the bridge current driver (52) and are no **mid-point termination voltage** shown in figures 4 and 6.

Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6, 8, 9 and 18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. None of the figures of the present application show that “ the driver circuit operates to limit the output voltage to about one-half of the supply voltage” as recited in claims 6. The same analysis is true for claims 8, 9 and 18. Note that the output (outp) varies between the ground and (Vcc).

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Correction and/or clarification is required.

Regarding claims 1, the recitation “control means for selecting between the first and second driving means” in claim 1 is indefinite because it is misdescriptive. In figures 5 and 6A of the present application, assume that the **first** driving means is (Pamp4) and the **second** driving means is (Pamp2) then the second driving means (Pamp 2) **does not receive any control signal from the control means**. Thus the control means cannot “operate to make only one of said first or second driving means active at any one time”. The applicant is requested to point out in **figures 5 and 6A** the first or second driving means, the logic control input signal and the **logic complement of the logic control signal** for enabling and disabling the second driving means (Pamp2). Note that the second driving means (Pamp2) in figure 6A does not have any control input. The same analysis is true for the **control means** in claims 2 and 3.

Regarding claim 8, the recitation “control means for **selecting between** the bridge current driver and the voltage driver” is indefinite because it is unclear what how the voltage driver (51) in figure 5 can be selected since there is no control signal connected to the voltage driver. The recitation “when the bridge current driver is selected, the terminating elements are coupled to the **mid-point termination voltage** and the lines are driven from the bridge current driver; and when the voltage driver is selected, the bridge current driver is disabled and the terminating elements are coupled to the voltage driver” is indefinite because it is unclear how the “terminating elements” are connected to the “mid-point termination voltage” (Vmid). It is also unclear how the “bridge current driver” and the “voltage driver” are selected since there is no “selection circuit” connected to both “bridge current driver” and the “voltage driver”. Figure 5 of the present application shows that there is only an “Enable” input that enables the “bridge current driver”. The Applicant is requested to point out the “a supply voltage”, “control means”,

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“terminating elements” and the connection between the terminating elements and the “mid-point termination voltage” in the drawings. Note that when the “bridge current driver” is turned on, and the “voltage driver” is turned off there is an only current flowing through the inductor (11) and there is no “mid point termination voltage” seen. The recitation “**when** the voltage driver is **selected**, the bridge current driver is disabled and the terminating elements are coupled to the voltage driver” is indefinite because it is unclear as to the “the terminating elements” on line 20 is the same or different than the “the terminating elements” on lines 15-16. In figures 5, 6A, 6B (r9, r10) are not connected as termination elements for (Pamp4) and (Pamp2).

Claims 4, 5, 7 and 10 are indefinite because of the technical deficiencies of claims 1 and 8.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 4, 7, and 21, insofar as understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Burke (US Pat. 3,843,834).

Regarding claims 1-3, figures 1 and 2 of Burke show a driver circuit for driving a line in a network comprising: first driving means (74) for driving the line; second driving means (76) for driving the line; and switching means (70) for switching between the first and second driving means (see col. 2, lines 50-65). Driving means (74) and (76) are turned on /off one at a time. The switching means (70) generates two outputs (C1) and (C2) for enabling or disabling the driving means.

Regarding claim 4, the first driving means (74) comprises a current source (69).

Regarding claim 7, the second driving means comprises a voltage source (V+)

Regarding claim 21, figure 1 and 2 of Burke show a method for providing multi-mode driver capability, the method comprising the steps of:

(a) providing a line driver circuit including both a current source and a voltage source;

- (b) selecting a first or second mode of operation;
- (c) operating the line driver circuit in a first configuration when the first mode of operation is selected; and
- (d) operating the line driver circuit in a second configuration when the second mode of operation is selected (see col. 2, lines 48-66).

Claims 11, 12, 14-17, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Lipcon (US Pat. 4,384,363).

Regarding claim 11, figure 4 of Lipcon shows a line driver (transmitter) circuit comprising: a current source (20) coupled a first pair of terminal of a termination network (82A-82C), a voltage source (16) coupled to a second pair of terminal of the terminal network (resistors coupled to the output of 16). The line driver operates in a first configuration (20 OFF) and in a second configuration (20 ON) (col. 5, lines 64-68 and col.6).

Regarding claim 12, the current source comprises a plurality of current sources.

Regarding claims 14, 15 and 16, when the current source (20) is OFF, the first mode of operation comprises voltage source mode (19 ON). In the second mode, the current source (20) is ON.

Regarding claim 17, when (20) is ON, the output of (19) is non-zero.

Regarding claims 19 and 20, the output of the voltage source output is coupled to the resistor network.

### ***Response to Argument***

In the Remarks page 11 and 12, The applicant argues that though “Burke appears to anticipate the claimed invention”, but the Burke reference has different **title** and “Burke’s system does not provide separately enabled current source drive and voltage source drive for the same pair of lines”. The applicant is reminded that a claimed circuit is examined based on the **structure** of the circuit recited in the claim, not it’s title. Moreover, “the separately enabled current source drive and voltage source drive for the same pair of lines” are **not disclosed** in claim 1. Thus, the claimed structure is fully met by Burke’s reference.

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Regarding 112, first paragraph rejection, even "Vmid is constrained to be one-half of the supply voltage" the output (outp) or (Ioutp) in figure 8 is not limited to about one half of the supply voltage because the output (outp) is pulled up or pulled down by transistors (mp20) and (mn20). Transistor (mp20) is connected to (Vcc) thus, the output swings between (Vcc) and ground, not between one-half of the supply voltage (Vcc) and ground as recited.

***Allowable Subject Matter***

Claim 13 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 5 and 8-10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Hiep Nguyen whose telephone number is (703) 305-0127. The examiner can normally be reached on Monday to Friday from 7:30 A.M. to 4:00 P.M.. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Callahan, can be reached on (703) 308-4876. The fax phone number for this Group is (703) 308-6251.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.

Hiep Nguyen

08-04-03



TUAN T. LAM  
PRIMARY EXAMINER